The analytical methods used to identify contaminants in the groundwaters of Dimock were selected to provide the broadest coverage possible. Normally when an analytical method is selected, the contaminant of interest and estimated concentration is known. For the Dimock project this was not completely the case. Even though many of the potential contaminants were known based on previous assessments, the impacts from the many chemicals used in drilling and hydraulic fracturing were unknown. So methods were selected to try and detect all of the potential contaminants that might be present.

Part of difficulties when analyzing for contaminants at extremely low concentrations is that a sample with relatively high concentrations of contamination (but still low in a real sense) can foul the extremely sensitive laboratory equipment. So in order to avoid this situation a typically less sensitive and broader spectrum method is used. Depending on the cleanliness of the sample being run, the sensitivity of the method can be increased to report below the quantitation limit. This is essentially what was done at the Dimock for most of the analytes. When this approach is used it requires the sample results to be qualified to acknowledge that the sample result was reported below the normal analytical method quantitation limit. This means that the value of the result is estimated since the result is being reported below the normal method quantitation limit.